

DOCUMENT RESUME

ED 201 394

PS 012 136

AUTHOR McCabe, Ann; Evelyn, Susan
TITLE The Incidence of Conditional Statements in the Natural Speech of Young Children.
PUB DATE Apr 81
NOTE 6p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Boston, MA, April 2-5, 1981).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Age Differences; Child Language; Foreign Countries; Form Classes (Languages); *Language Proficiency; *Language Usage; Pragmatics; Semantics; *Siblings; *Verbal Communication; *Young Children
IDENTIFIERS Canada; *Conditionals; *Natural Language

ABSTRACT

This study examines the incidence and character of conditional statements ("if...then") in the spontaneous speech of young children. Twenty-four pairs of siblings, ranging in age from 2.1 years to 7.3 years, were observed and recorded while interacting in their homes for a period of 1 hour. Sixty-nine statements including "if" were selected from transcripts of the children's spontaneous speech and then were coded for logical correctness, grammatical correctness, semantic content pragmatics, and order of clauses. Overall, 62.5% of the children produced at least one "if...then" statement. Such statements were produced by 87.5% of the older children and 38% of the younger children. None of the statements included logical errors and the statements were grammatically correct in 90% of the instances. The most common grammatical error (6 of 7) involved lack of tense agreement between clauses in unreal conditionals, e.g., "if you were a paint monster, then it will..." Semantic categorization indicated that 6% of the statements involved causal relationships, 10% relationships of entailment, 22% relationships involving two events stemming from shared assumptions, and 62% events showing some relationships. Regarding the pragmatic categorization, 38% of the children's conditionals were used to offer bribes and threats, 29% were used to describe physical relationships, 16% provided information about social conventions, and 13% were explorations of potential relationships. (Author/MP)

The Incidence of Conditional Statements in the
Natural Speech of Young Children*

Ann McCabe & Susan Evelyn

University of Windsor University of Toronto

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

ED201394

I The present study was undertaken in an attempt to determine the incidence and character of conditional ("if ... then") statements in the spontaneous speech of young children. Previous researchers (Kuczaj & Daly, 1979; Menyuk, 1969) have reported infrequent use of conditionals by young children. In the sample studied by Menyuk (1969), it was reported that only 36% of children used "if" conjunctions and that the majority of these children were in the first grade. It has been further reported that when conditionals are produced by young children they commonly include logical errors (Menyuk, 1969; Werner & Kaplan, 1963) and that children have difficulty understanding such statements presented to them (Emerson, 1980; Paris, 1973).

The conditional statement is of particular interest since it is this form which is generally used in formal hypothesizing. While it is unlikely that young children engage in much formal hypothesizing, the presence of conditional statements in their speech might be seen as a verbal precursor to such an ability.

Subjects for the present study were 24 pairs of siblings. The children ranged in age from 2 yrs., 10 mos. to 4 yrs., 1 mo. for the younger sibling (mean age - 3 yrs, 3 mos.) and from 4 yrs., 5 mos. to 7 yrs., 3 mos. for the older sibling (mean age - 5 yrs, 7 mos.). Sibling pairs were observed and recorded interacting within their own homes for a period of 1 hour. There were no attempts to direct or otherwise influence what was assumed to be their usual mode of interaction. Mothers were sometimes though not always present.

Statements including "if" were selected from transcripts of the children's spontaneous speech and then coded for logical correctness, grammatical correctness,

PS 012136

semantic content, pragmatics, and order of clauses. Semantic content was coded according to Braine's (1978) 4 category classification of contingent relationships:

- (1) causal relationships - e.g. "If you drink paint, you'll get sick."
- (2) relationships of entailment - e.g. "I have to make a line for us, if you want to play."
- (3) two events stemming from shared assumptions - e.g. "If it goes past this, it's a goal."
- (4) relationships showing some correlation - e.g. "I want the ball, if it fits."

The pragmatic (or quasi-pragmatic) categories were derived from the data and included:

- (1) bribes and threats - e.g. "If you want a cup, you have to play my games."
- (2) statements of personal intention excluding bribes and threats - e.g. "Well, if we do this year, I'm going to take my two camping (toys)."
- (3) statements describing physical relationships - e.g. "You see if you took that one out, it would fall down"
- (4) statements providing information about social conventions - e.g. "If I say 'it's mine', you wouldn't say, 'no, it's mine.'"
- (5) statements exploring possible relationships - e.g. "Then we would have to call her sleeping beauty if she never woke up."

There were a total of 82 "if" utterances in the speech samples. Of these 82, thirteen were deleted from the analyses, nine because only one clause was completed before the child was interrupted or distracted, and 4 which were statements in which "whether" could have been substituted for "if." The latter do not lend themselves to the classification schemes and unlike other "if ... then" statements do not allow clause order variation. Thus, 69 statements were included in the analyses.

The incidence of conditional statements in the present data was considerably higher than that previously reported. Overall, 62.5% of the children produced at least one "if ... then" statement. They were produced by 87.5% of the older and 38% of the younger children. None of the statements included logical errors and the statements were grammatically correct in 90% of the instances. The most common grammatical error (6 of the 7) involved lack of verb tense agreement between clauses in unreal conditionals, e.g. "If you were a paint monster, then it will".

Semantic categorization indicated that 6% of the statements involved causal relationships, 10% were relationships of entailment, 22% were relationships involving 2 events stemming from shared assumptions, and 62% were events showing some correlation. The distribution of statements across these categories was essentially the same for the two age groups.

Regarding the pragmatic categorization, 38% of the children's conditionals were used to offer bribes or issue threats, 4% were statements of personal intention other than bribes and threats, 29% were used to describe physical relationships, 16% provided information about social conventions, and 13% were explorations of potential relationships. Again, the two age groups did not differ noticeably in their proportional use of the categories. Clearly bribes and threats are the most popular uses of conditionals among these children. The exploration of potential relationships is, perhaps, the most interesting category, however, since it is these statements that come closest to hypotheses. In such statements, the children appear to be conjoining two events of uncertain but possible relationship. In some instances the child attempts to provide an explanation of events, the real explanation of which he does not know, e.g. "You get to do it, if you're small", in an attempt to explain why the speaker (a 3 yr. old girl) could hang by her legs from a jungle gym while her older

sister who had fallen off a week previously could not, or should not. Alternatively, s/he suggests a linkage between possible (or sometimes impossible) events and their possible outcomes, e.g., "If you were a paint monster then it will.", which was an assertion by a 5 yr. old that paint would taste good to a paint monster.

Overall, there was only a slight preference for placing the "if" clause first (55%), thereby conforming to the order of occurrence of events. The order of events is not always clear-cut, however, especially when the relationship is one of entailment.) For individual children there was a marked preference for particular clause orders. Of those children who produced two or more conditional statements (35.5% of the sample) three-fourths characteristically (i.e., at least 75% of the time) placed the "if" clause in the same position within their sentences.

Although our data include a much higher incidence of conditional statements than that previously reported, this discrepancy would not seem to be difficult to reconcile. The data in previous investigations have been drawn primarily from children's conversations with adults. In the present case, children are not only conversing with one another, but they are conversing with the children with whom they are most familiar, their siblings. The most prevalent use of conditionals among these children is to offer bribes or issue threats, but such statements are seldom addressed to adults. Only 14% of the conditionals addressed to adults by these children were bribes or threats. Moreover, for many of our children, this was the only use of the conditional. If we include only those children who produce conditionals which are other than bribes or threats, the incidence drops to 42% of the sample, a figure similar to that reported by Menyuk.

In summary, the use of the conditional is not especially infrequent in the spontaneous speech of young children. The frequency of its use, however, seems highly dependent on context. Similarly, the infrequency of logical and grammatical errors in the present data, suggests that they also are dependent on context in that their occurrence is more likely in the kinds of statements more often addressed to adults. While children's use of conditionals is generally in the service of the expression of relatively simple relationships, there are instances in which one can see the glimmer of sophistication.

References

- Braine, M. On the relation between the natural logic of reasoning and standard logic. Psychological Review, 1978, 85, 1-21.
- Emerson, H. Children's judgements of correct and reversed sentences with 'if'. Journal of Child Language, 1980, 7, 137-155.
- Kuczaj, S. & Daly, M. The development of hypothetical reference in the speech of young children. Journal of Child Language, 1979, 6, 563-579.
- Menyuk, P. Sentences Children Use. Cambridge, Mass.: M.I.T., 1969.
- Paris, S. Comprehension of language connectives and propositional logical relationships. Journal of Experimental Child Psychology, 1973, 16, 278-291.
- Werner, H. & Kaplan, B. Symbol Formation. New York: Wiley, 1963.

*Acknowledgments

The authors wish to thank Rona Abramovich, Carl Corter and Debra Pepler of the Centre for Research in Human Development, University of Toronto, for their kind cooperation with the present investigation.